

REMARKS

Claims 1-15 were reviewed on their merits. Claim 16-19 have been added to the application.

Formal Matters

1. Applicant respectfully requests that the Examiner acknowledge Applicant's claim to priority and the priority documents filed on March 26, 2001.

2. The Examiner objects to the drawings as containing non-English commendations. Applicant submitted formal drawings on July 5, 2001 and therefore requests that the Examiner withdraw the objection from the drawings and indicate that the drawings have been accepted.

3. Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph. Applicant submits that the amendments to claim 5 correct a typographical error and overcome the rejection.

Art Rejections

1. Claims 1-4, 6-10, and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kitahara et al EP 0827838 ("Kitahara") in view of Barbehenn et al. U.S. Patent No. 5,363,134 ("Barbehenn"). Claims 1, 3 6 and 8 are independent claims. Applicant respectfully traverses this rejection for at least the reasons stated below.

Independent Claim 1

Kitahara fails to disclose, teach or suggest at least the following limitations of independent claim 1:

providing ID data for identifying the respective
nozzle orifices;
providing correction data for correcting the amount
of liquid jetted from the identified nozzle orifice;

adjusting a displacement behavior of a piezoelectric vibrator associated with the identified nozzle orifice, based on the correction data.

The Examiner asserts that Kitahara teaches "correction data" as recited in independent claim 1. In support of his contention, the Examiner points generally to the RAM 4 as disclosing a storage means and print data comprising four bits per nozzle orifice as disclosing the correction data. The citations relied on by the Examiner generally address how a nozzle ejects an ink drop in response to drive signal pulses that respectively correspond to the print data associated with each nozzle orifice. The Examiner therefore appears to assert that the print data of Kitahara is the correction data recited in claim 1.

The correction data recited in independent claim 1 is for correcting the amount of liquid jetted from a specific nozzle which is identified by ID data. Specifically, the amount of liquid jetted from the specific nozzle is corrected by adjusting the displacement behavior of the piezoelectric vibrator associated with the identified nozzle orifice based on the correction data. The print data stored in the RAM 4 of Kitahara clearly does not suggest correction data that corrects the amount of liquid jetted from a nozzle.

The Examiner concedes that Kitahara further fails to disclose, teach or suggest providing ID data for identifying a respective nozzle orifices. The Examiner therefore relies on Barbehenn to fulfill at least this deficiency.

Barbehenn is directed to an integrated circuit for use in an ink jet printer which includes an array circuit for heating an ink reservoir to produce a pattern of ink jets. Barbehenn, however, fails to disclose, teach or suggest correction data that corrects the amount of liquid jetted from a nozzle.

Without at least such a suggestion, one would not have been (and could not have been) motivated to combine the ink jet printing method, as disclosed in Kitahara, with the integrated circuit printhead, as taught in Barbehenn, to produce a liquid jetting method which uses correction data to correct the amount of liquid jetted from an identified nozzle. Because there can be found in Barbehenn no teaching or suggestion that meets the above-identified limitations, the combination of Kitahara and Barbehenn cannot reasonably be said to render obvious the claimed subject matter. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from independent claims 1, 3, 6 and 8 and the claims that depend therefrom.

Independent Claim 3

Since claim 3 contains features that are similar to the features discussed above in conjunction with independent claim 1, Applicant submits that claim 3 and its dependent claims are patentable for at least such reasons.

Independent Claim 6

Since claim 6 contains features that are similar to the features discussed above in conjunction with independent claim 1, Applicant submits that claim 6 and its dependent claims are patentable for at least such reasons.

Independent Claim 8

Since claim 8 contains features that are similar to the features discussed above in conjunction with independent claim 1, Applicant submits that claim 8 and its dependent claims are patentable for at least such reasons.

2. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kitahara et al EP 0827838 ("Kitahara") in view of Barbehenn et al. U.S. Patent No. 5,363,134

("Barbehenn") in regards to claim 8, and in further view of Bain U.S. Patent No. 4,521,786 ("Bain").

Claim 11 depends from independent claim 8. Kitahara and Barbehenn are deficient with respect to claim 8 for at least the reasons stated above. Furthermore, since Bain fails to compensate for the foregoing deficiencies, Applicant submits that claim 11 is patentable at least by virtue of its dependency. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from independent claim 11 and the claims that depend therefrom.

3. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kitahara et al EP 0827838 ("Kitahara") in view of Barbehenn et al. U.S. Patent No. 5,363,134 ("Barbehenn") in regards to claim 2. Claim 12 ultimately depends from independent claim 1 and thus is patentable at least by virtue of its dependency. The Examiner contends that the phrase "can be divided" is improper because the phrase does not indicate whether the result of the division is an integer or a real number. Therefore, the Examiner argues that claim is overly broad.

Applicant respectfully traverses this rejection. Seeing as though claim 2 depends from claim 1, claim 2 includes every limitation of claim 1. In light of the arguments presented above that place independent claim 1 in condition for allowance, Applicant respectfully submits that claim 2 is not overly broad. The Examiner is respectfully requested to withdraw the rejection from claim 12.

Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No. 09/816,770

New Claims Added

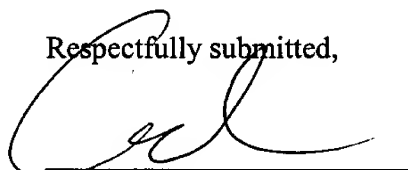
Applicant has added new claims 16-19 and submits that the newly added claims are patentable at least by virtue of their respective dependency from independent claims 1, 3, 6 and

8. Applicant further submits that no new matter has been added.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

5. (Amended) The liquid jetting method as set forth in claim 4, wherein the intervals are determined such that a phase of residual vibration of a meniscus of the liquid in the nozzle orifice is adjusted due to jetting by a preceding drive signal